Clean Air Partnership

Indoor Heat Bylaw Series Workshop 1: Understanding the Heat Risk Landscape in Canadian Communities

May 7, 2025

This workshop covered topics including climate change and rising heat events, the impact of heat events on health and productivity, and an overview of the roles municipalities have been playing during heat events.

Presenters

- Devanshi Kukadia, Senior Manager, Climate Programs, Clean Air Partnership
- Dr. Sehjal Bhargava, Board Member, Canadian Association of Physicians for the Environment (CAPE)
- Stephanie Gower, Program Manager, Environment, Policy and Research, City of Toronto
- Jacqueline Wilson, Canadian Environmental Law Association (CELA)

Key Findings

- By 2030, one third of the Earth's population will reside in areas with average temperatures over 28°C.
- Vulnerability can be understood through three lenses: exposure, individual context, and environmental context.
- One key finding from the 2021 heat dome in Canada is that nearly all deaths attributed to heat occurred *indoors*, thereby emphasizing the critical need for action on indoor air temperatures. During this extreme event, many individuals were at home without adequate cooling options.
- The urban heat island effect contributes to temperature disparities across urban and rural regions, with urban areas often being 10-15 degrees hotter than their rural counterparts. This discrepancy exacerbates heat exposure in marginalized communities that may lack green spaces and tree canopy coverage.
- The healthcare system lacks adequate preparations to handle an increase in patients resulting from extreme heat or other climate-related events. Evidence suggests that vulnerability assessments are necessary to determine how healthcare facilities can respond effectively to such emergencies.
- Most of the existing stock of old rental buildings built between the 1950s and the 1980s in our communities lack central air conditioning and often exist in concrete-heavy environments with limited green space. This exacerbates urban heat impacts on the neighborhood's residents.

- The proposal of a 26°C threshold for indoor temperatures stems from recent studies conducted in Canada and the United Kingdom, which highlight the health risks associated with temperatures exceeding this level.

Presentation Overview

Dr. Sehjal Bhargava, Board Member, Canadian Association of Physicians for the Environment (CAPE)
Topic: Impacts of rising temperatures and extreme heat events on Canadian Communities

- Extreme heat is one of the leading weather-related causes of death.
- Heat waves are characterized by unusually high temperatures lasting several consecutive days and have serious implications for human and natural systems.
- Extreme heat can cause several health issues, including cardiovascular strain, dehydration, and organ damage, and the physiological responses to high temperatures can cause serious complications, particularly among those with pre-existing health conditions.
- Extreme heat is linked to a number of health problems, particularly among those with existing medical conditions. For example, individuals with diabetes or hypertension, especially those on certain medications, face increased risks during heat waves.
- Statistics show that the majority of heat-related hospital admissions and fatalities occur within the first 24 hours of exposure. Even after this acute response, the long-term effects may persist indefinitely.
- Establishing a maximum indoor heat bylaw is a critical public health measure. This approach, if effectively enforced, could significantly reduce heat-related morbidity.
- Focusing on enhancing green infrastructure and promoting community connections, such as checking on neighbors, can provide a support network for vulnerable individuals during extreme heat.
- Community-based organizations play a crucial role in outreach, particularly concerning senior citizens and those living in shelters. By leveraging the knowledge and resources of these organizations, health systems can implement additional check-ins for vulnerable populations, especially during extreme weather events

Stephanie Gower, Program Manager, Environment, Policy and Research, City of Toronto
Topic: Health and equity impacts of extreme heat in built environments

- One survey indicated that nearly 35% of low-income households do not have air conditioning, thereby highlighting significant equity issues. This absence disproportionately impacts renters and increases their exposure to extreme heat.

- Heat vulnerability mapping within Toronto illustrated stark disparities in protection against extreme heat. Areas with lower income levels tend to experience higher vulnerability, often correlating with less green space and a greater concentration of multi-residential buildings.
- This mapping reflects systemic issues where populations in high-urban heat settings (often consisting of newcomers or lower-income residents) find themselves at increased risk when facing climate impacts.
- City of Toronto is actively engaging with organizations and communities to collect testimonies from residents in vulnerable housing. These perspectives inform responses to protect tenants from extreme heat.
- The City is implementing a new policy that alters heating and cooling date ranges to provide more extended cooling periods in response to rising temperatures.
- A key aspect of this initiative is setting 26 degrees Celsius as a health-based maximum indoor temperature standard. This will be reviewed at the end of December.

Devanshi Kukadia, Senior Manager, Climate Programs, Clean Air Partnership
Topic: Overview of the Jurisdictional Scan of Maximum Temperature Bylaws and CAP's Backgrounder

- The jurisdictional scan found that approximately 25 notable maximum temperature bylaws throughout North America aim to regulate indoor heat, highlighting differing strategies and implementations across jurisdictions.
- The only Canadian city with a maximum temperature bylaw currently in effect is Mississauga, where the City mandates that indoor temperatures in rental units should not exceed 26 degrees Celsius during summer months.
- Building regulations in British Columbia now mandate that new constructions must ensure indoor temperatures do not exceed 26 degrees Celsius, although this requirement applies only to new buildings, leaving existing structures unsupported by existing legislation.
- In Ontario, regulations dictate that all long-term care homes must maintain a maximum temperature of 26 degrees Celsius, addressing the specific needs of vulnerable populations.
- The backgrounder developed by Clean Air Partnership aims to equip municipal staff with necessary information to support the implementation of maximum temperature bylaws in local jurisdictions, thus highlighting the need for such regulations.

Jacqueline Wilson, Canadian Environmental Law Association (CELA)
Topic: Municipal authority and ability to advance a maximum temperature bylaw

- Municipalities in Ontario are provided with a broad legislative mandate in the *Municipal Act* in s.8. This section is notable in its repetition of the word broad.
- Section 8(3) of the Municipal Act gives powers through by-laws to regulate or prohibit matters

- Section 10 and section 11 list subject matters that can be addressed in municipal by-laws.
    - (5) Economic, social and environmental well-being of the municipality, including respecting climate change.
    - (6) Health, safety and well-being of persons.
    - And
    - (8) Protection of persons and property, including consumer protection.
- The Building Code Act is another source of legal authority with respect to municipalities governing property standards. Section 15.1(3) says:
    - The municipality may pass a by-law prescribing standards for the maintenance and occupancy of property
    - The by-law can prohibit occupancy of the property if it does not conform to the property standards
    - The by-law can require properties to be repaired and maintained
- Many court cases illustrate how municipalities navigate the intersection of local bylaws and provincial laws. For instance, the Volcano Cafe case from 2023 examined a smoking bylaw and found that municipalities can impose stricter standards than those set by provincial statutes if they have the jurisdiction to do so.
- Other court cases demonstrate instances where courts found no conflict between municipal bylaws and provincial laws, such as cases involving garbage management and public nuisance powers under the Municipal Act (in Ontario). These rulings affirm municipalities' rights to legislate in ways that promote public well-being and address nuisances.
- Courts have routinely upheld municipalities' authority to regulate matters such as zoning, property standards, and public safety, demonstrating a nuanced understanding of the interplay between different layers of law.

Additional Resources

- Clean Air Partnership Accelerating Municipal Climate Change Adaptation to Extreme Heat Project Page
- Backgrounder on Maximum Temperature Bylaw
    - English
    - French
- Jurisdictional Scan of Maximum Heat Related Bylaws and Policies
    - English
    - French
- Spatial distribution of heat vulnerability in Toronto, Canada
- Eyquem, J., & Feltmate, B. (2022). Irreversible extreme heat: Protecting Canadians and communities from a lethal future. Intact Centre on Climate Adaptation, University of Waterloo.

- Lugten, E., & Hariharan, N. (2022). Strengthening health systems for climate adaptation and health security: Key considerations for policy and programming. Health Security, 20(5), 435-439.

- Cities across Canada consider maximum temperature policy for rental units.
- Registration links for upcoming Indoor Heat Bylaw Workshops
    - May 20: Understanding Municipal Maximum Temperature Bylaws
    - June 12: Turning Policy into Action – Implementing the Maximum Heat Bylaw

Contact Information

Please reach out to us at any time with questions, input, or for additional information.

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